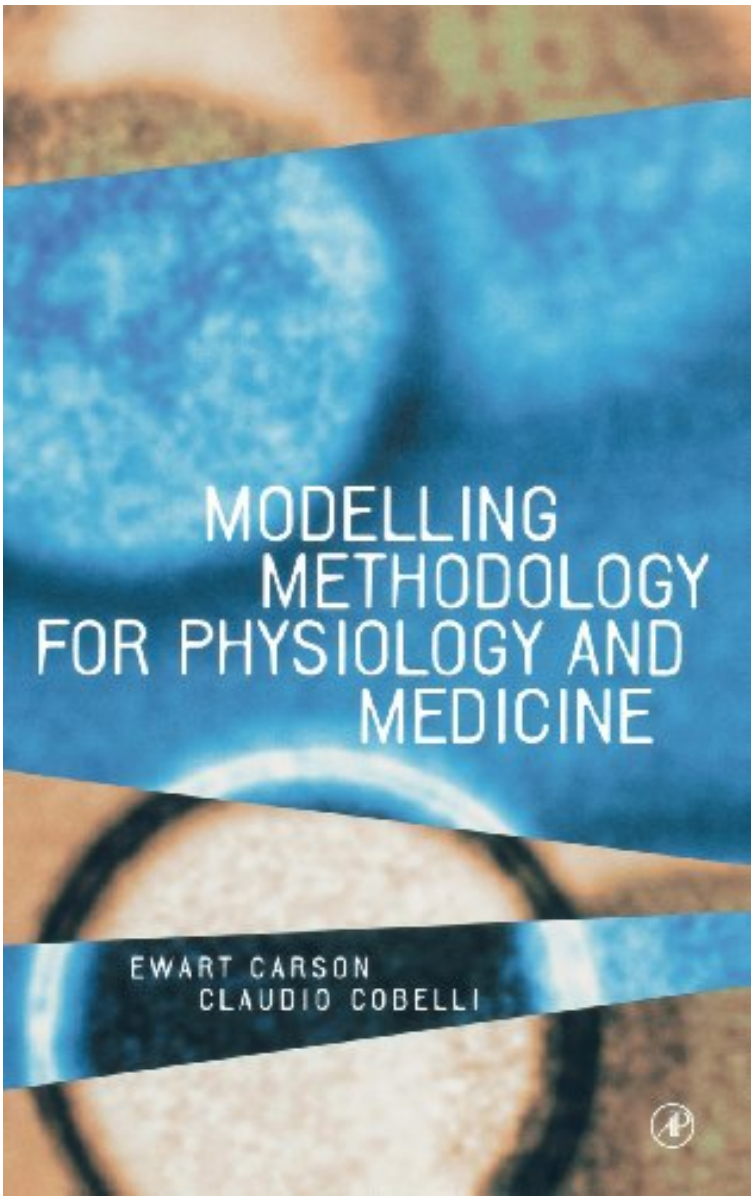
Modelling Methodology for Physiology and Medicine (Biomedical Engineering)

From Academic Press
*audiobook | *ebooks | Download PDF | ePub | DOC*



#5421068 in Books 2000-10-23Original language:EnglishPDF # 1 9.00 x 1.00 x 6.00l, 1.53 #File Name: 0121602451421 pages | File size: 65.Mb

From Academic Press : Modelling Methodology for Physiology and Medicine (Biomedical Engineering) before purchasing it in order to gage whether or not it would be worth my time, and all praised Modelling Methodology for

Physiology and Medicine (Biomedical Engineering):

Modelling Methodology for Physiology and Medicine offers a unique approach and an unprecedented range of coverage of the state-of-the-art, advanced modelling methodology that is widely applicable to physiology and medicine. The book opens with a clear and integrated treatment of advanced methodology for developing mathematical models of physiology and medical systems. Readers are then shown how to apply this methodology beneficially to real-world problems in physiology and medicine, such as circulation and respiration.Builds upon and enhances the readers existing knowledge of modelling methodology and practiceEditors are internationally renowned leaders in their respective fields

From the Back CoverThis book provides state-of-the-art treatment of advanced methodology for the development of mathematical models of physiological and medical systems. This methodology is then applied to a range of real-world problems of circulation and respiration and in metabolism and endocrinology. There is no book currently available that provides such an approach or this range of coverage. This volume is written by authors drawn from two authoritative, internationally-renowned teams; and it is edited by two leaders in the field of physiological modelling who have extensive research experience and publication track records. In addition, Modelling Methodology for Physiology and Medicine is written in an integrated manner for ease of communication, and its editors have extensive experience teaching this material at a range of levels to both technical and clinical audiences.From this book the reader will gain knowledge of the state of the art, advanced modelling methodology that has wide applicability in physiology and medicine. They will also acquire an understanding of how such methodology can be applied beneficially in tackling real-world problems in physiology and medicine. Finally, this volume will enable the reader to build logically on, and to update their existing knowlege of modelling methodology and practice.About the AuthorEwart Carson is Visiting Professor of Systems Science in the Centre for Health Informatics at City University, London. Educated at the University of St Andrews in Scotland and City University London, he holds a PhD in Systems Science and a DSc in Measurement and Information in Medicine. He holds Honorary Membership of the Royal College of Physicians (London) and Fellowships of the IEEE, the International Academy of Medical and Biological Engineering and the American Institute of Medical and Biological Engineers. Publications include 13 authored and edited books and more than 300 journal papers and chapters. Areas of research interest and expertise include: modelling in physiology and medicine; modelling methodology for health resource management; clinical decision support systems; evaluation methodologies with particular application in telemedicine; and integrated policy modelling for ICT enhanced public healthcare. As a systems scientist, all this research is undertaken within a clear systemic framework.Claudio Cobelli received a Doctoral degree (Laurea) in Electrical Engineering in 1970 from the University of Padova, Padova, Italy. From 1970 to 1980, he was a Research Fellow of the Institute of System Science and Biomedical Engineering, National Research Council, Padova, Italy. From 1973 to 1975 and 1975 to 1981, he was Associate Professor of Biological Systems at the University of Florence and Associate Professor of Biomedical Engineering at the University of Padova, respectively. In 1981, he becomes Full Professor of Biomedical Engineering at University of Padova. From 2000 to 2009, he has been Chairman of the Graduate Program in Biomedical Engineering. From 2000 to 2011, he has been Chairman of the Ph.D. Program in Bioengineering at the University of Padova. His main research activity is in the field of modeling and identification of physiological systems, especially metabolic systems. His research is currently supported by NIH, JDRF and European Comunity. He has published 450 papers in internationally refereed journals, co-author of 8 books and holds 11 patents. He is currently Associate Editor of IEEE Transaction on Biomedical Engineering and Journal of Diabetes Science Technology. He is on the Editorial Board of Diabetes and Diabetes Technology Therapeutics. Dr.Cobelli has been Chairman (1999-2004) of the Italian Biomedical Engineering Group, Chairman (1990-1993 1993-1996) of IFAC TC on Modeling and Control of Biomedical Systems and member of the IEEE EMBS AdCom Member (2008-2009). He has been a member of the Gruppo di Esperti della Valutazione (GEV), Area 09, of the Agenzia Nazionale per la Valutazione del Sistema Universitario e della Ricerca (ANVUR) for the period 2011-2013. He is President of the Organo di Indirizzo of the Azienda Ospedaliera Universita' di Trieste In 2010 he received the Diabetes Technology Artificial Pancreas Research Award. He is Fellow of IEEE, BMES and EAMBES.Joseph Bronzino is one of the most renowned biomedical engineers in the world. He is a former president of the IEEE Engineering in Medicine and Biology, and well-known educator. He is editor-in-chief of the Biomedical Engineering Handbook from CRC Press, and is currently editor of the Academic Press Series in Biomedical Engineering. He is the Vernon Roosa Professor of Applied Science at Trinity College in Hartford, Connecticut.